REMARKS

Applicants appreciate the thorough examination of the present application as evidenced by the Office Action of May 27, 2008 (hereinafter "Final Action").

In response, Applicants have amended independent Claims 1, 27, and 32 as indicated above to clarify the relationship between the application flows and access sessions recited therein. Support for these amendments can be found, for example, at Page 22, lines 3-17 and Figure 6 of the present application. No new matter has been added.

Accordingly, Applicants hereby request further consideration of the application in view of the amendments above and the comments that follow.

Independent Claims 1, 27, and 32 Are Patentable over Freed and DSL Evolution

Claims 1-44 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 7,073,055 to Freed et al. (hereinafter "Freed") in view of 'DSL Evolution—Architecture Requirements for the Support of QoS Enabled IP Services', Revision 8 (hereinafter "DSL Evolution"). This rejection is respectfully traversed.

Amended Claim 1, for example, recites, in part:

> **a first subsystem that is configured to manage** QoS, session authentication and/or bandwidth allocation for **an access session** from the CPN, wherein the access session comprises a connection between the NSP and/or ASP and the CPN; and
>
> **a second subsystem that is configured to independently manage** QoS, session authentication and/or bandwidth allocation for **a plurality of different application flows** from the CPN **in response to a message from the RAN indicating available QoS, session authentication, and/or bandwidth allocation settings for one of the plurality of application flows**, wherein the plurality of application flows respectively comprise a set of data packets associated with respective ones of a plurality of applications provided via the access session between the NSP and/or ASP and the CPN, **wherein the QoS, session authentication, and/or bandwidth allocation for at least two of the plurality of application flows are different**. (*Emphasis added*).

Thus, according to exemplary embodiments, a first subsystem is configured to manage QoS/authentication/bandwidth allocation between a NSP/ASP and a CPN for a particular access session between a Network Service Provider (NSP) and/or Application Service

Provider (ASP) and a Customer Premises Network (CPN). However, a second subsystem is configured to independently manage QoS/authentication/bandwidth allocation for a plurality of different application flows respectively associated with the different applications (e.g., video conferencing session, VoIP call, etc.) provided via the access session. *See also* Specification, Pages 12-14. For example, as described in the present application with respect to managing different application flows, "[r]ate limits can be applied to each of the applications to ensure that a single application cannot starve out all other applications". Specification, Page 22, lines 7-8. *See also* Specification, Figure 6 and Table 1.

The Final Action asserts that Freed discloses all of the recitations of Claim 1 with the exception of a plurality of subsystems. *See* Final Action, Pages 3 and 4. As such, the Final Action relies on User1 and User2, illustrated in Figure 2 of DSL Evolution, as providing first and second subsystems. *See* Final Action, Page 3 and 4.

As an initial matter, Applicants note that the Final Action fails to address all of the recitations of Claim 1 in its rejection of Claim 1. *See* Final Action, Pages 3 and 4. In particular, in the "Response to Arguments" section, the Final Action asserts that both Freed and DSL Evolution disclose systems configured to manage QoS, session authentication, and/or bandwidth allocation "for an access session from the CPN". Final Action, Pages 2-3 (*emphasis added*). However, while the Final Action may rely on Freed and/or DSL Evolution as disclosing a system that is configured to manage QoS/authentication/bandwidth allocation *for an access session*, the Final Action does not rely on Freed and/or DSL Evolution as disclosing a second system that is configured to manage QoS/authentication/bandwidth allocation "*for* ***an application flow****...provided via* ***the access session***", as recited by original Claim 1.

Applicants further note that the cited portions of Freed do not disclose or suggest managing QoS/authentication/bandwidth allocation for a plurality of different application flows provided via the access session "wherein the QoS, session authentication, and/or bandwidth allocation for at least two of the plurality of application flows are different", as recited by amended Claim 1. Rather, Freed describes a system where a network service provider (such as the ISP 156 of Figure 5) can identify and authenticate a user network entity

(such as customer premises equipment (CPE) 18 of Figure 5), and can dynamically configure a network connection between the user network entity and the data network accordingly. *See* Freed, Col. 13, line 18 to Col. 14, line 30 and Figure 5. For example, as described in Freed:

> At step 226, a communication link between the user network entity and a data network is established...the established communication link is configured based on the network service configuration parameters dynamically specified in the first message. For example, if the first message specified a QoS configuration parameter set...the communication link is configured based on the specified QoS set.

Freed, Col. 21, lines 11-19. Accordingly, in the system of Freed, the network service provider/ISP can configure a communication link between the authenticated user network entity/CPE and the data network according to network service parameters (such as QoS parameters) specified in a message from the user network entity. *See also*, Freed, Fig. 10. In other words, although Freed may disclose dynamically configuring QoS parameters for a communication link between the network and the CPE, the cited portions of Freed fail to disclose or suggest independently managing such QoS parameters for a plurality of different application flows provided over the same communication link, where at least two of the application flows provided over the *same* communication link have *different* QoS parameters.

Nor do the cited portions of DSL Evolution disclose or suggest these recitations. For example, the Final Action asserts that Figure 2 of DSL Evolution discloses the first and second subsystems of Claim 1 in its illustration of User1 and User2 as part of the customer premises network (CPN). *See* Final Action, Page 3 and 4. However, in describing Figure 2, DSL Evolution merely notes that "the figure [2] shows many-to-many access through a common Regional/Access network...to simultaneously provide an Application Service$_1$ between an ASP Network$_1$ and a User$_1$...and...a Network Service$_2$ between NSP Network$_2$ and User$_2$." DSL Evolution, Page 7, lines 5-7. As such, while Figure 2 of DSL Evolution may illustrate respective access sessions between the ASP and User1 and between the NSP and User2, it does not disclose or suggest that one or more of the illustrated access sessions provides a plurality of different application flows, nor that at least two of such flows include different QoS/authentication/bandwidth allocation. *See* DSL Evolution, Figure 2. Likewise, the cited portions of DSL Evolution do not disclose or suggest independent management of

QoS/authentication/bandwidth allocation for a plurality of different application flows in response to a message from the RAN "indicating available QoS, session authentication, and/or bandwidth allocation settings for one of the plurality of application flows", as recited by amended Claim 1.

Applicants further submit that it would not have been obvious to combine the teachings of Freed and DSL Evolution "to obtain a predictable result to provide an advanced DSL architecture that provides a dynamic network services," as asserted by the Final Action. *See* Final Action, Page 3. In particular, while Freed may disclose providing dynamic network services for a network connection, Freed fails to disclose or suggest independently providing different network service parameters for each of the different application flows provided via the network connection. Accordingly, the recitations of Claim 1 provides far more than a predictable result, as required by the U.S. Supreme Court in *KSR International Co v. Teleflex Inc., et al.*, 550 U.S. 1, 12 (2007).

Thus, Applicants submit that the combination of Freed and DSL Evolution fails to disclose or suggest at least the recitations of Claim 1 highlighted above. Accordingly, Applicants submit that amended Claim 1 is patentable for at least these reasons. Amended Claim 27 includes method recitations for similarly managing bandwidth and/or QoS for a "plurality of application flows...wherein the bandwidth and/or QoS settings for at least two of the plurality of application flows are different," and is thus patentable for at least similar reasons. Amended Claim 32 includes computer program product recitations corresponding to the system of Claim 1, and as such, is also patentable for at least similar reasons. Also, dependent Claims 2-26, 28-31, and 33-44 are patentable at least per the patentability of Claims 1, 27, and 32 from which they depend.

Many of the Dependent Claims Are Separately Patentable

As discussed above, Applicants note that the dependent claims are patentable at least per the patentability of independent Claims 1, 27, and 32 from which they depend. Moreover, Applicants submit that various dependent Claims are separately patentable.

For example, Claims 2, 3, 4, and 5 respectively recite "RAN to RG" access session and/or application flow message generators configured to send particular messages "from the RAN to the RG" to notify the RG of bandwidth and/or QoS information. Likewise, Claims 6 and 7 recite "RG to RAN" access session and/or application flow message generators configured to send particular messages "from the RG to the RAN" to obtain from the RG bandwidth and/or QoS information stored in the RAN. The Final Action cites the same portions of DSL Evolution (in particular, Sections 4.2.6.2 and 4.2.7.2 and Figs. 14, 16, and 21) as disclosing all of the recitations of Claims 2-7. *See* Final Action, Pages 5-7.

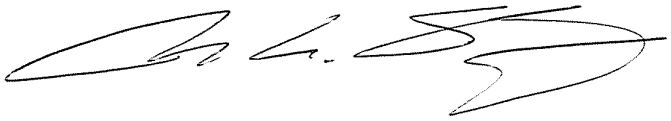
However, Applicants respectfully submit that nowhere do the cited portions of DSL Evolution disclose or suggest sending the specific messages and/or information recited in Claims 2-7 between the RAN and the RG. In particular, with reference to Claims 2-5, the cited portions of DSL Evolution do not disclose or suggest notifying the RG of: 1) new bandwidth/QoS information available for an access session, 2) new bandwidth/QoS information available for an application flow, 3) access session bandwidth/QoS settings stored in the RAN, and/or 4) application flow bandwidth/QoS settings stored in the RAN. *See* DSL Evolution, Sections 4.2.6.2 and 4.2.7.2 and Figs. 14, 16, and 21. Likewise, with reference to Claims 6 and 7, the cited portions of DSL Evolution do not disclose or suggest obtaining access session bandwidth/QoS settings and/or application flow bandwidth/QoS settings from the RG. *Id.* Accordingly, Applicants note that, while the cited portions of DSL Evolution may generally disclose the network configuration recited by the pending claims, nowhere do the cited portions of DSL Evolution disclose or suggest the specific messages and/or information transmitted between the RG and the RAN recited by Claims 2-7. Thus, Applicants submit that Claims 2-7 are separately patentable for at least the above reasons. Claims 33-38 respectively include similar recitations, and are thus separately patentable for at least similar reasons. Claim 28 includes similar recitations to Claims 6 and 7, and is therefore also separately patentable for at least similar reasons. If the Examiner continues to maintain the rejections of these claims based on DSL Evolution, Applicants respectfully request that the Examiner point out specific portions of DSL Evolution, by page and line number, that disclose or suggest the recitations of these claims.

Also, Claims 8 and 9 recite message generators that send messages from the RAN to the ASP to indicate to the ASP "what RAN resources are authorized for an access session", and "that an application flow control request from the ASP to the RAN has been accomplished successfully", respectively. The Final Action asserts that Sections 5.3, 5.3.1, 5.3.2 and Figure 21 of DSL Evolution disclose these recitations. *See* Final Action, Page 7. However, as noted above, while the cited portions of DSL Evolution may disclose the general network configuration recited by these claims, nowhere do the cited portions of DSL Evolution disclose or suggest sending specific messages from the RAN to the ASP to provide the information described in Claims 8 and 9. *See* DSL Evolution, Sections 5.3, 5.3.1, and 5.3.2 and Figure 21. Thus, Applicants submit that Claims 8 and 9 are separately patentable for at least these reasons. Claims 39 and 40 respectively include similar recitations, and are thus separately patentable for at least similar reasons. Claim 29 also includes similar recitations to Claims 8 and 9, and is therefore also separately patentable for at least similar reasons.

Conclusion

Accordingly, in light of the above amendments and remarks, Applicants respectfully submit that all of the pending claims are now in condition for allowance. Thus, Applicants respectfully request allowance of the pending claims and passing the application to issue. Applicants encourage the Examiner to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,



Rohan G. Sabapathypillai
Registration No. 51,074

USPTO Customer No. 39072
Myers Bigel Sibley & Sajovec
Post Office Box 37428
Raleigh, North Carolina 27627
Telephone: 919/854-1400
Facsimile: 919/854-1401

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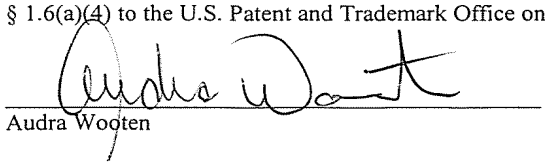

Audra Wooten